

**PATENT COOPERATION TREATY**  
**PCT**  
**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**  
(Chapter II of the Patent Cooperation Treaty)  
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 600666PWO/JH/DG	<b>FOR FURTHER ACTION</b>		See Form PCT/IPEA/416
International application No. PCT/GB2004/004097	International filing date (day/month/year) 24.09.2004	Priority date (day/month/year) 24.09.2003	
<p>International Patent Classification (IPC) or national classification and IPC A61J3/10, B30B11/02, A61K9/28, B30B11/08, B65G17/32</p>			
<p>Applicant BIOPROGRESS TECHNOLOGY LIMITED et al.</p>			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 9 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> <i>(sent to the applicant and to the International Bureau)</i> a total of sheets, as follows:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</li> <li><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</li> </ul> <p>b. <input type="checkbox"/> <i>(sent to the International Bureau only)</i> a total of (indicate type and number of electronic carrier(s)), containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>			
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input checked="" type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>			
Date of submission of the demand 12.04.2005	Date of completion of this report 18.08.2005		
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer De Terlizzi, M Telephone No. +49 89 2399- 		

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**Box No. I Basis of the report**

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
  - This report is based on translations from the original language into the following language, which is the language of a translation furnished for the purposes of:
    - international search (under Rules 12.3 and 23.1(b))
    - publication of the international application (under Rule 12.4)
    - international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements\*** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

**Description, Pages**

1-54 as originally filed

**Claims, Numbers**

1-35 as originally filed

**Drawings, Sheets**

1/27-27/27 as originally filed

- a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3.  The amendments have resulted in the cancellation of:
  - the description, pages
  - the claims, Nos.
  - the drawings, sheets/figs
  - the sequence listing (*specify*):
  - any table(s) related to sequence listing (*specify*):
4.  This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
  - the description, pages
  - the claims, Nos.
  - the drawings, sheets/figs
  - the sequence listing (*specify*):
  - any table(s) related to sequence listing (*specify*):

\* If item 4 applies, some or all of these sheets may be marked "superseded."

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**Box No. IV Lack of unity of invention**

1.  In response to the invitation to restrict or pay additional fees, the applicant has:
  - restricted the claims.
  - paid additional fees.
  - paid additional fees under protest.
  - neither restricted nor paid additional fees.
2.  This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is
  - complied with.
  - not complied with for the following reasons:  
**see separate sheet**
4. Consequently, this report has been established in respect of the following parts of the international application:
  - all parts.
  - the parts relating to claims Nos. .

**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes: Claims	1-16,19-25,29,32,34,35
	No: Claims	17,18,26-28,30,31,33
Inventive step (IS)	Yes: Claims	1-16,24,32,34,35
	No: Claims	17-23,25-31,33
Industrial applicability (IA)	Yes: Claims	1-35
	No: Claims	

**2. Citations and explanations (Rule 70.7):**

**see separate sheet**

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**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

Reference is made to the following documents:

- D1: EP-A-0 691 121 (EISAI CO LTD ; SANKYO SEISAKUSHO KK (JP)) 10 January 1996 (1996-01-10)
- D2: US-A-5 682 733 (PERRONE ALDO) 4 November 1997 (1997-11-04)
- D3: US 2003/070903 A1 (SOWDEN HARRY S ET AL) 17 April 2003 (2003-04-17)
- D4: US-A-3 677 673 (LEONARD SHAPIRO) 18 July 1972 (1972-07-18)

1. This Authority considers that there are 6 inventions covered by the claims indicated as follows:

- I: Claims 1 to 15 directed to an apparatus for forming a compacted powder slug coated with a film comprising a piston having a front face with a concave recess and a square edge around the circumference of the front face
- II: Claim 16 directed to an apparatus for forming a compacted powder slug coated with a film comprising a film preconditioner for temporarily retaining and heating the film
- III: Claims 17, 18 directed to an apparatus for forming a compacted powder slug coated with a film comprising a platen with at least one aperture proximate to the pockets to allow a vacuum to be formed between the platen and the film
- IV: Claims 19 to 25 directed to an apparatus for forming a compacted powder slug coated with a film comprising a platen with a recessed surface between a plurality of raised edge profiles each forming a circumference of a pocket
- V: Claims 26 to 32 directed to an apparatus for forming a compacted powder slug coated with a film comprising a turntable for holding the platen and rotatable to transfer the platen from one station to another station
- VI: Claims 33 to 35 directed to an apparatus for forming a compacted powder slug coated with a film comprising a gasket for receiving and retaining the compacted powder slug to transport and release it to a desired location.

The reasons for which the inventions are not so linked as to form a single general

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inventive concept, as required by Rule 13.1 PCT, are as follows:

The prior art has been identified as document EP-0691121 and discloses:

- an apparatus for forming a compacted powder slug coated with a film comprising:
  - a platen (10) having a pocket (9) for receiving a vacuum formed film into the pocket and receiving a powder (despite the fact that the pocket disclosed in EP-0691121 does not comprise any vacuum forming means, the pocket is indeed suitable to receive a vacuum formed film in its interior)
  - a mechanical means comprising a compression piston (21) for compacting the powder in said pocket (9),

wherein the piston (21) has a front face with a concave recess (see figure 3F)

It follows that the following technical features of claim 1 make a contribution over the prior art and can be considered as special technical feature within the meaning of Rule 13.2 PCT:

- the piston has a square edge around the circumference of the front face.

No technical feature corresponding to the special technical feature above can be found in any of the independent claims 16, 17, 19, 26, 33. Therefore, there is no technical relationship among the invention claimed in claim 1 and those claimed in claims 16, 17, 19, 26, 33 involving a corresponding technical feature, and the requirements of Rule 13.2 PCT are not fulfilled.

The application, hence does not meet the requirements of unity of invention as defined in Rules 13.1 and 13.2 PCT.

2. The document D1 is regarded as being the closest prior art to the subject-matter of claim 1, and shows (the references in parentheses applying to this document):

- an apparatus for forming a compacted powder slug coated with a film comprising:
  - a platen (10) having a pocket (9) for receiving a vacuum formed film into the pocket and receiving a powder (despite the fact that the pocket disclosed in D1 does not comprise any vacuum forming means, the pocket is indeed suitable to receive a vacuum formed film in its interior)

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- a mechanical means comprising a compression piston (21) for compacting the powder in said pocket (9)
- the piston (21) has a front face with a concave recess (see figure 3F)

The subject-matter of claim 1 differs from this known apparatus in that:

- the piston has a square edge around the circumference of the front face

The subject-matter of claim 1 is therefore new (Article 33(2) PCT).

The problem to be solved by the present invention may be regarded as providing the piston with means to cut the film coating of the slug

The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:

The piston of D1 does not intend to cut the film coating, therefore the person skilled in the art would have no reason to realize a square edge around the circumference of the front face of piston (21). Moreover, none of the pistons disclosed in the available prior art are designed to cut the film coating, and the operation is rather performed by separate means.

Claims 2 to 14 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

3. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 17 is not new in the sense of Article 33(2) PCT.

The document D3 discloses (the references in parentheses applying to this document):

- an apparatus for forming a compacted powder slug coated with a film comprising:
  - a platen (114) comprising an array of pockets (126) suitable for receiving a vacuum formed film into the pockets and receiving a powder
  - the platen comprising at least one aperture (134) proximate to said pockets

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(126) to allow a vacuum to be formed between the platen and the film (see also paragraphs [0134] to [0139] and figures 10 to 12)

- a mechanical means comprising a compression piston (118) for compacting the powder in said pocket (126)

4. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 19 does not involve an inventive step in the sense of Article 33(3) PCT.

The document D1 is regarded as being the closest prior art to the subject-matter of claim 19, and discloses (the references in parentheses applying to this document):

- an apparatus for forming a compacted powder slug coated with a film comprising:  
- a platen (10) having a pocket (9) for receiving a vacuum formed film into the pocket and receiving a powder (despite the fact that the pocket disclosed in D1 does not comprise any vacuum forming means, the pocket is indeed suitable to receive a vacuum formed film in its interior)  
- a mechanical means comprising a compression piston (21) for compacting the powder in said pocket (9)

The subject-matter of claim 19 therefore differs from this known apparatus in that:

- the platen has a recessed surface between a plurality of raised edge profiles each forming a circumference of pocket  
- a cutting sleeve moveable to interfere with the raised edge to cut a film supported thereon

The problem to be solved by the present invention may therefore be regarded as providing means to effectively cut the film supported by the pockets.

Document D2 discloses a platen having recesses (32, see figures 3,4) with a raised rim and a recessed surface between two adjacent rims, the rim cooperating with corresponding sleeves (top platens, see figure 2) to cut the film (see column 6, lines 10-23)

The person skilled in the art, faced with the technical problem above, would be

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prompted by the teaching of document D2 to include raised rims around the pockets of D1 and recessed surfaces between two adjacent rims, and have the rims cooperate with piston 21 (figure 3F, it can be considered a sleeve) of D1 to cut the film 23. He would then arrive to an apparatus falling within the subject matter of claim 19.

5. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 26 is not new in the sense of Article 33(2) PCT.

The document D1 discloses (the references in parentheses applying to this document):

- an apparatus for forming a compacted powder slug coated with a film comprising:
  - a platen (10) having a pocket (9) for receiving a vacuum formed film into the pocket and receiving a powder (despite the fact that the pocket disclosed in D1 does not comprise any vacuum forming means, the pocket is indeed suitable to receive a vacuum formed film in its interior)
  - a dosing means (figure 3C) for placing the powder in the pocket
  - a mechanical means comprising a compression piston (21) for compacting the powder in said pocket (9)
  - a turntable (3, figure 1) for transferring the platens

6. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 26 is not new in the sense of Article 33(2) PCT.

The document D1 discloses (the references in parentheses applying to this document):

- an apparatus for forming a compacted powder slug coated with a film comprising:
  - a platen (10) having a pocket (9) for receiving a vacuum formed film into the pocket and receiving a powder (despite the fact that the pocket disclosed in D1 does not comprise any vacuum forming means, the pocket is indeed suitable to receive a vacuum formed film in its interior)
  - a mechanical means comprising a compression piston (21) for compacting the powder in said pocket (9)
  - a gasket (dye 10) for receiving, retaining and transporting the powder slug

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7. Dependent claims 18,20-23,25,27,29,30,31 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step, see documents D1-D4 and the corresponding passages cited in the search report.